

REPORT ON BOILERS.

Goth. No. 8586
No. 14250

Gothenburg 28.12.1931

Received at London Office

28 OCT 1930 2 JAN 1932

Date of writing Report

19

When handed in at Local Office

27-10-1930

Port of MIDDLESBROUGH Gothenburg

No. in g. Book

Survey held at STOCKTON Gothenburg

Date, First Survey

31 July

Last Survey

24-10-1930

on the

Boiler for Aktiebolaget Gotaverken "SARNA KNUDSEN"

(Number of Visits 11)

Gross 9057 Tons
Net 5389

aster

Built at

Gothenburg

By whom built

AB Gotaverken

Yard No. 442

When built 1931

engines made at

Gothenburg

By whom made

AB Gotaverken

Engine No. 1935

When made 1931

boilers made at

Stockton

By whom made

Riley Bros. (Boilermakers) Ltd.

Boiler No. 5979

When made 1930

nominal Horse Power

708

Owners

Knut Knutsen O.A.S.

Port belonging to

Haugesund

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Witkowitz Bergbau- und Eisenhütten Gewerkschaft

(Letter for Record S.)

Heating Surface of Boilers

1374 sq. ft.

Is forced draught fitted

Yes

Coal or Oil fired

Oil

Kind and Description of Boilers

1 S.B.

Working Pressure

150 lbs.

Tested by hydraulic pressure to

275 lbs.

Date of test

24-10-30

No. of Certificate

6829

Can each boiler be worked separately

Yes

No. of Firegrate in each Boiler

1

No. and Description of safety valves to each boiler

Double spring loaded

Pressure of each set of valves per boiler

per Rule

12.5 lb.

as fitted

14.1 lb.

Pressure to which they are adjusted

154 lb.

Are they fitted with easing gear

Yes

Use of donkey boilers, state whether steam from main boilers can enter the donkey boiler

No main boilers fitted.

Least distance between boilers or uptakes and bunkers or woodwork

1000 mm

Is oil fuel carried in the

Yes

Least distance between shell of boiler and tank top plating

500 mm

Is the bottom of the boiler insulated

Yes

Least internal dia. of boilers

11'-0"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

28/32

Thickness

3/32

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R.

Seams T.R.D.B.S. (5 rivets)

Diameter of rivet holes in

circ. seams

1 1/16"

Pitch of rivets

3 3/8" x 6 1/4"

Percentage of strength of circ. end seams

plate 66.0

rivets

44.9

Percentage of strength of circ. intermediate seam

plate

84.7

Percentage of strength of longitudinal joint

plate 84.7

rivets

111.0

Working pressure of shell by Rules

150 lbs.

Thickness of butt straps

outer 5/8"

inner 3/4"

No. and Description of Furnaces in each Boiler

2 c.f.

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3'-3 3/8"

Length of plain part

top

bottom

Thickness of plates

crown 1/16"

bottom 1/16"

Description of longitudinal joint

weld

Dimensions of stiffening rings on furnace or c.c. bottom

Yes

Working pressure of furnace by Rules

159 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

3/32"

Pitch of stays

16" x 13 3/4"

How are stays secured

D.N.W.

Working pressure by Rules

150 lbs.

End plates: Material

front Steel

back Steel

Tensile strength

26/30

Thickness

3/32"

173 lbs.

Mean pitch of stay tubes in nests

10 9/16"

Pitch across wide water spaces

13 1/2" x 7 1/2"

Working pressure

front 173 lbs.

back 212"

Orders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

Centre

7' x 5/8" (double)

Length as per Rule

2'-5"

Distance apart

8"

No. and pitch of stays

Each

2.9'

Working pressure by Rules

156 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

5/8"

Back

19/32

Top

5/8"

Bottom

5/8"

Pitch of stays to ditto: Sides

9" x 9 1/2"

Back

9 1/2" x 8 3/8"

Top

9" x 8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

151 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

3/32"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

3/32"

Pitch of stays at wide water space

13" x 8 3/8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

207 lbs.

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay, 2 1/4"

Over threads

No. of threads per inch

6

Area supported by each stay

216 sq. in.

Working pressure by Rules

160 lbs.

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part, 1 1/2"

Over threads

No. of threads per inch

9

Area supported by each stay

83.7 sq. in.

Working pressure by Rules 150 lbs. Are the stays drilled at the outer ends no. Margin stays: Diameter ^{At turned off part,} 1 5/8" Over threads 1 5/8"

No. of threads per inch 9. Area supported by each stay 98 in² Working pressure by Rules 155 lbs.

Tubes: Material iron External diameter ^{Plain} 2 3/4" to 2 7/8" Thickness ^{Stay} 7/16" No. of threads per inch 9.

Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules p. 160 lb. s. 206 lbs. Manhole compensation: Size of opening 17 1/2"

shell plate 20 x 16 Section of compensating ring 7 x 1 No. of rivets and diameter of rivet holes 40 - 1 7/16"

Outer row rivet pitch at ends 7" Depth of flange if manhole flanged _____ Steam Dome: Material _____

Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____

Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint ^{Plate} _____ ^{Rivets} _____

Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter _____

stays _____ Inner radius of crown _____ Working pressure by Rules _____

How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and _____

of rivets in outer row in dome connection to shell _____

Type of Superheater _____ Manufacturers of ^{Tubes} _____ ^{Steel castings} _____

Number of elements _____ Material of tubes _____ Internal diameter and thickness of tubes _____

Material of headers _____ Tensile strength _____ Thickness _____ Can the superheater be shut off _____

the boiler be worked separately _____ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____

Area of each safety valve _____ Are the safety valves fitted with easing gear _____ Working pressure at _____

Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____

tubes _____, castings _____ and after assembly in place _____ Are drain cocks or valves _____

to free the superheater from water where necessary _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes.

Yes. The foregoing is a correct description,
J. H. Shields, Manufacturer

Dates of Survey ^{During progress of} 1930 July 31 Aug 26 Sep 28 9 11 16 23 29 Are the approved plans of boiler and superheater forwarded herewith Yes.
^{while} Dec 15 24 (If not state date of approval) with Rpt No 1424
^{building} 1930 Dec 4 1931 Aug 11 Dec 16 Total No. of visits 11 + 3.

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. Riley 5978. Mal Rpt No 1424

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The Materials and workmanship are good.

This boiler has been built under Special Survey in accordance with the Rules and approved plan

This Donkey boiler has been fitted on board this vessel under my inspection and to my satisfaction.

Survey Fee ... £ 9.4.0. When applied for, Monthly

Travelling Expenses (if any) £ : : When received, 19

Committee's Minute FRI. 8 JAN 1932

Assigned

See Lot 56 8586

S. Wood Engineer Surveyor to Lloyd's Register of Shipping



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